REMARKS

Claims 1-21 were previously pending in the application. Claims 19 and 21 are canceled; claims 1, 6-8, 13-15, 18, and 20 are amended; and new claims 22-23 are added herein. Assuming the entry of this amendment, claims 1-18, 20, and 22-23 are now pending in the application. The Applicants hereby request further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

In paragraph 4, the Examiner rejected claims 1-4, 7, 10, 12, 18, and 19 under 35 U.S.C. § 102(b) as being anticipated by Lindskog. In paragraph 6, the Examiner rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Lindskog in view of Ho. In paragraph 7, the Examiner rejected claims 8-9 under 35 U.S.C. § 103(a) as being unpatentable over Lindskog in view of Romans. In paragraph 8, the Examiner rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Lindskog in view of Lu. In paragraph 9, the Examiner rejected claims 6, 13-17, 20, and 21 under 35 U.S.C. § 103(a) as being unpatentable over Lindskog in view of Ho and further in view of Lu.

For the following reasons, the Applicants submit that all pending claims are allowable over the cited references.

Support for the amendment of claim 1 can be found, e.g., in original claim 8; Figs. 2C and 3C; on page 6, lines 20-29; and on page 9, lines 20-30. The amendment of claim 18 is similarly supported. Support for the amendment of claim 13 can be found, e.g., in original claim 15. The amendment of claim 20 is similarly supported. Support for the amendment of claims 6 and 15 and for new claims 22-23 can be found, e.g., in Figs. 3A-C and on page 9, lines 5-7 and 16-19.

Amended claim 1 is directed to a method of operating a station of a contention-based WLAN system, in which the station can operate in awake and doze states. The method has the steps of: (A) with the station in the doze state, transitioning the station from the doze state to the awake state; and (B) **transmitting** to an access point (AP) of the system a first frame, wherein a designated bit in the first frame informs the AP that the station will remain in the awake state and be available to receive at least one transmission from the AP. Step (A) comprises: starting a timer when the station has transitioned into the doze state; and if there is no data available for transmission from the station to the AP, then transitioning the station from the doze state to the awake state when the timer reaches a threshold value. Step (B) is performed **after** the station has **transitioned to the awake state due to the timer** reaching the threshold value **but before** the station **receives a next frame** from the AP.

In the rejection of original claim 8, the Examiner cites and relies on Romans' Fig. 5 and paragraphs [0012], [0065], and [0087].

Romans' Fig. 5 shows a transition between the "asleep" state (center circle) and an "awake" state (upper circle) governed by a "Wakeup timer." Romans' Fig. 5 also indicates that the station in that awake state is "Waiting for Control Point Beacon (CPB)." Romans' Fig. 5 does not show any other timers that govern transitions between the asleep (doze) state and any of the several different awake states shown in the figure.

Romans' paragraph [0011] explains that "each remaining station periodically enters its active state to **receive** the beacon signal" (emphasis added). Romans' paragraph [0012] further explains that, if the beacon indicates that there are data for the station to receive, then the station transmits a status signal to indicate that it is active and able to receive data (see also Roman's Fig. 2, events after "PS Station wakes up").

Romans' paragraph [0065] explains that "A PS station will wake-up periodically to **receive** the CP Beacon" (emphasis added). Romans' paragraph [0087] explains that "From the countdown counter the station can then determine the start of the broadcast period and go into sleep mode until **immediately before the start of the broadcast** period when it will **wake-up to receive** the CPB at the start of the broadcast period" (emphasis added).

From these teachings, one concludes that, in the method of Romans, the very first communication action of a power-saving (PS) station after it wakes up due to the wake-up timer is to **receive** a frame (e.g., beacon) from the control point (access point). The Applicants submit that Romans does not teach or even suggest the step of transmitting a frame after the station has transitioned to the awake state due to the timer but before the station receives a next frame from the AP. In contrast, this step is explicitly recited in claim 1.

The Applicants submit that the remaining references, independently or in combination, do not rectify this deficiency of Romans with respect to claim 1.

For all these reasons, the Applicants submit that claim 1 is allowable over the cited references. For similar reasons, the Applicants submit that claim 18 is also allowable over the cited references. Since claims 2-12 and 23 depend variously from claims 1 and 18, it is further submitted that those claims are also allowable over the cited references.

Amended claim 13 is directed to a method of operating an access point (AP) of a contention-based WLAN system in which a station is adapted to operate in awake and doze states. The method has the step of receiving from the station a first frame, wherein a **more data bit of an IEEE 802.11 standard** in the first frame **informs** the AP **that** the station will remain in the **awake state** and be available to receive at least one transmission from the AP.

In the rejection of original claim 15, the Examiner cites and relies on Lu's paragraph [0039], the relevant portion of which reads as follows:

> The control field preferably includes a protocol version field **172**, type and subtype fields **174** and **176**, TO and FROM DS bits **178**, **180**, a more fragment bit **182**, retry and power management bits **184** and **186**, a more data bit **188**, a Wired Equivalent Privacy (WEP) bit **190** and a forward error correction (FEC) bit **192**... The more fragment bit **182** specifies whether there are more fragments associated with the current MSDU to follow. The more data bit **188** specifies whether more MSDUs are buffered for the addressed station at an access point (AP) after the transmission of this frame.

It is evident from this passage, that Lu does not go beyond the conventional utility of the "more data" bit, which is to inform the receiving station about the presence or absence, at the transmitting station, of buffered frames intended for the receiving station. Clearly, Lu does not teach that the "more data" bit can contain any information about a future (doze or awake) state of the transmitting station. Rather, Lu explicitly teaches that its method relies on conventional power management bits **184** and **186** to encode the power-management mode of the station (see also Lu's paragraph [0042]).

In contrast, the method defined by claim 13 uses a more data bit to inform the AP about the station's awake state for the next transmission from the AP. The Applicants submit that the cited references, independently or in combination, do not teach or even suggest such a feature.

For all these reasons, the Applicants submit that claim 13 is allowable over the cited references. For similar reasons, the Applicants submit that claim 20 is also allowable over the cited references. Since claims 14-17 and 22 depend variously from claims 13 and 20, it is further submitted that those claims are also allowable over the cited references.

New claim 23, which depends from claim 18, further specifies how a more data bit of an IEEE 802.11 standard in an acknowledgement frame can be used to manage transitions between the doze and awake states. The Applicants submit that the cited references, independently or in combination, do not teach or even suggest such a feature. These facts provide additional reasons for the availability of claim 23 over the cited references. The Applicants further submit that at least some of these additional reasons similarly apply to each of claims 6, 15, and 22.

In view of the above amendments and remarks, the Applicants believe that the now-pending claims are in condition for allowance. Therefore, the Applicants believe that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Fees

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17 or credit any overpayment to **Mendelsohn & Associates, P.C. Deposit Account No. 50-0782**.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

Respectfully submitted,

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